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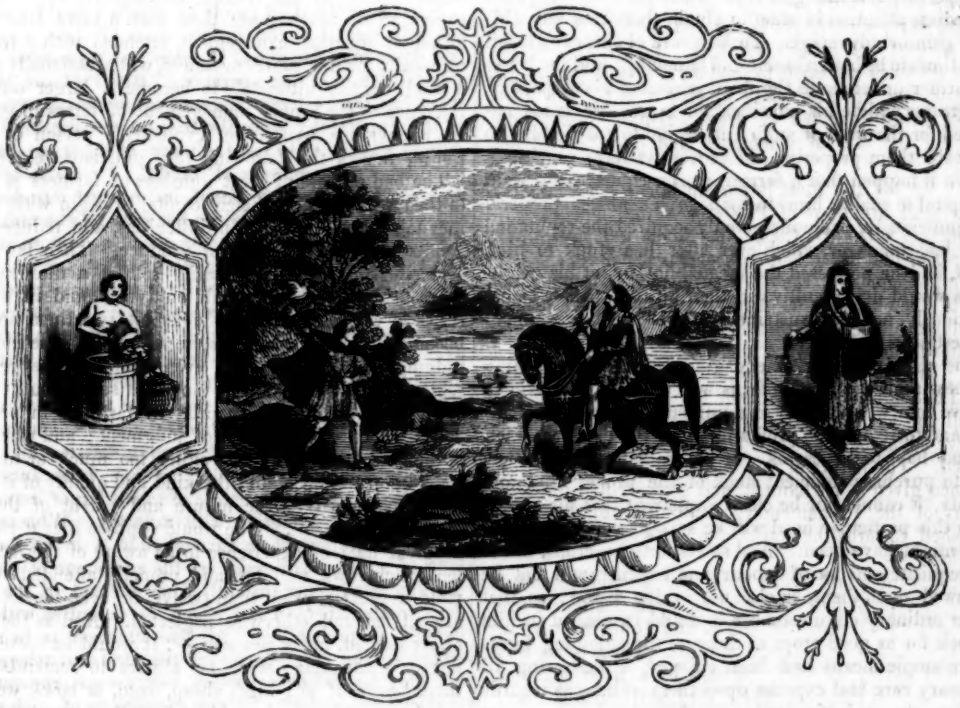
BRITISH AGRICULTURE.

OCTOBER.



[Emblems of October.—From Saxon Calendars. Hawking; Cotton MS., Tib., B. 4. Sowing; Lansdowne MS., 381. Picking Grapes for Wine; Lansdowne MS., 383.]

The glory of the summer has now passed away, and winter, with its train of rains, fogs, storms, frosts, and snows, will soon overtake us. During the present month, however, the meadows and pastures continue to wear a modest though not a vivid green: and notwithstanding the leaves on the trees are becoming seared and shrivelled, while those that are the tenderest and most susceptible of cold are often by the middle of the month seen flickering from the branches they adorned and beautified during their brief summer, still the hedge-rows and the groves do not present the absolute sterility of winter nakedness, for that is rarely brought to pass until the blasts of November have scattered the remnants of the past season. By the beginning of the month, however, we frequently find the woods and groves assuming all the varieties of tints that nature's pencil alone can impart.

> "But see, the fading many-coloured woods,
> Shade deepening over shade, the country round
> Imbrown; a crowded umbrage, dusk and dun,
> Of every hue, from wan declining green
> To sooty dark."*

During the early part of the present month, or sometimes during the latter part of September, the martins and swallows that have raised their broods—probably two, and sometimes more, under the eaves of our own dwellings, or upon the beams and rafters and inner walls of our barns and outbuildings—begin to assemble in numerous flocks, evidently preparing for their departure: the gathering of the swallows is an epoch in the seasons in every part of the country. Other summer birds take their departure with less parade and preparation, and the common opinion that the swallows are bound for some far off country, serves to increase the interest connected with their disappearance. The few birds that repair to our shores as the winter approaches create but little interest compared with those that come to spend their summers here; though to the sportsman a numerous arrival of woodcocks is a matter of peculiar satisfaction, and the youthful gunner hails with delight the appearance of large flocks of fieldfares, which, quitting the colder regions of Norway, come to pass the winter amongst us, probably finding a more plentiful supply of wild berries and other food than in their native Norwegian wilds. It is commonly said that when the hawthorn hedges are loaded with haws, that we may look for numerous flocks of fieldfares. There is another old superstitious prediction respecting these said haws, to the effect that "many haws betoken many snows," or, in other words, a severe winter.

* Thomson's 'Seasons'

Since autumn is the season when the ordinary round of farming business may be said to commence anew, and when the possession of lands is commonly changing, this appears a fitting opportunity for offering a few remarks upon the subject of renting and stocking farms in general; for although the rent of a farm may not be too high, a want of attention to this latter particular may very often account for the want of success in farming. We frequently see indications of a strong desire in the farming community to undertake larger farms than prudence would allow, or than a limited capital could possibly stock and cultivate properly; by which means the parties thus acting not only find themselves embarrassed in their circumstances, being not only unable punctually to meet their engagements, but under the disagreeable necessity of neglecting something or other which they know requires immediate attention in order to obtain therefrom any ultimate gain or advantage. To be aware of this cannot fail at all times to be both irksome and annoying; and the better the farmer understands the management of his crops, &c., the greater will be his mortification to see his lands neglected for the want of sufficient capital to enable him to cultivate them properly. Moreover, we have sometimes known it happen that a farmer, in consequence of a want of capital to enable him to manage his affairs properly and judiciously, has undeservedly acquired the reputation of a bad manager, which ever after has stuck to him, when, had he possessed the means, not any of his neighbours would have cultivated their farms better or more judiciously, nor have sustained a fairer reputation among the best class of farmers.

The disadvantages of engaging in a larger farming business than a person's means will warrant, is certain to involve him who does so in a numerous train of difficulties, and to reduce his profits upon all the produce which he may have to dispose of. If his capital will not allow him to purchase sufficient stock of the proper kind and quality, it cannot but be clearly apparent that his profits upon this particular head will be smaller than they otherwise might have been. And as respects his crops, either the requisite amount of labour and expense will not be bestowed upon them, or else not in due season; so that under ordinary circumstances it would be absurd in him to look for as good crops as those on the adjoining farms where ample means had been enjoyed of bestowing all necessary care and expense upon them. Then, as regards markets, the needy farmer is ever obliged to have recourse to his stock or his stack-yard to meet both the direct and incidental expenses that may come against him and his establishment, whereby he has not an opportunity of regulating his sales by the rise or fall in the market prices, for he *must* sell, however low the markets may be, in order to meet the ordinary payments that are continually coming against a farmer for domestic supplies, wages, taxes, rent, tithes, &c. How differently off is the farmer who has got a little surplus capital in the corner of his chest, or in some secure institution where he can at any time command it, should an advantageous outlay warrant its investment. Besides, should an unfavourable season take place, or a great depression of prices in agricultural productions occur, he will then be able to reserve his stock and crops instead of disposing of them at a great disadvantage, his small reserved fund or capital being sufficient to meet all immediate demands.

We frequently hear it asserted that nothing is to be made upon small farms; but this we consider a rather vain and vague assertion: for it seems to involve a principle which has been the ruin of thousands. It is not to be expected that wealthy practical farmers should be contented to sit down on small farms where large ones are to be had, provided their intention is to make farming a business; but we must insist upon the soundness of our general principle—that where parties are possessed of but small capital (of course we mean in the farming line) they had much better refrain from involving themselves in a maze of difficulties by entering into engagements that would require a much greater amount of capital than they can command, and which in a very few years might reasonably be expected to end in the landlord's taking possession of the stock, crops, &c., in order to secure the rents that would have become due to him: and whatever opprobrium they may conceive attached to the term 'small farmers,' they had infinitely better submit to it with a becoming grace, than, by giving way to a foolish ambition, lose all they ever possessed, and end with having their names enrolled in the list of common labourers, and probably close their career in the parish poorhouse.

Notwithstanding farm-produce realises good prices at present, farmers possessed of small capital, like persons of small capital in the trading community, ought not to expect to do much more than earn a mere livelihood; although superior management, attended with a train of unusually fortunate circumstances, will occasionally enable a small farmer ultimately to become a larger one. In reference to the proper management of farms in general, an anonymous writer, but evidently a person of experience, makes the following very judicious remarks:—"The bad success of great numbers of farmers is owing to their not having sufficient capital to begin with, which inevitably involves them in difficulties, and reduces their profits upon every article of produce. Their farms are understocked; they necessarily sell at a disadvantage, their fields are scarcely half cultivated, and in a short series of years, unless some lucky hit sets them up, they become abjectly poor, in spite of all possible industry, judgment, and application: even a low and easy rent will seldom remedy the want of money at setting out."

Next to the want of capital in farming in order to ensure success, is the want of judgment; and where this is the case, we usually find either too much or too little stock upon the farm, and the kind and quality of it not at all proportioned to the nature and extent of the productions of the soil. One would suppose that it required no great deal of experience to be aware of the fact, that ten milch-cows, well fed and properly attended to, will yield a greater profit than twelve or even fourteen that are ill fed and otherwise neglected. And as the writer above quoted justly remarks—"It would be more to the farmer's advantage were he always to remember that three beasts of any kind, sheep, oxen, or cows, well fed, pay better than four would without the proper supply of food." But too little stock, as well as too much, may be kept, and either extreme is equally wrong. It is not, however, altogether in the improper manner of stocking a farm that the want of judgment is apparent, since the nature and amount of agricultural implements necessary to carry on the various processes of husbandry upon a farm of a certain extent should be clearly comprehended by the practical farmer; for where there are many more implements and utensils than are really necessary, it is ten to one that those not in use will not have proper care taken of them. Besides, capital thus invested would be uselessly sunk. On the other hand, a deficiency of those things most commonly employed about a farm is a continual inconvenience, and often causes a great sacrifice and waste of time. But the skilful farmer will take Tusser's advice, and employ "Thrift's officers," and thereby ensure his complete success:—

> "Make money thy drudge, for to follow thy work,
> Make wisdom comptroller, and order thy clerk;
> Provision cater, and skill to be cook,
> Make steward of all, pen, ink, and thy book."*

If implicit credit is to be attached to the records of olden times, as connected with practical agriculture, there seems but little doubt that those who might then be considered the better class of farmers were accustomed to

* 'Good Husbandry Lessons.'

sow their winter grain, that is, their wheat and their rye, a few weeks earlier in the season than is at present approved of; for immediately on the crops being cleared away, the ground was forthwith prepared for the reception of another crop; and as early as practicable the seed was again committed to the soil; so that in the more favourable districts seed-time was mostly over by the end of September. In Tusser's time early sowing was generally practised; and in his 'September's Husbandry' he strongly urges—

> "Thresh seed, and to farming, September doth cry,
> Get plough to the field, and be sowing of rye."

And he further adds—

> "Sow timely thy white wheat, sow rye in the dust,
> Let seed have her longing, let soil have her lust:
> Let rye be partaker of Michaelmas spring,
> To bear out the hardness that winter doth bring."

In those days, however, the general practice of cultivating the various sorts of soils differed so greatly from the present, that it would be difficult to arrive at any solid basis upon which it might be safe to found a direct opinion as to what degree the custom of early sowing was in itself radically bad; for it should be borne in mind that a couple of centuries ago there were no large tracts devoted to those enriching and ameliorating crops —turnips and potatoes, besides various other sorts of green crops; nor was the system of raising artificial grasses, which has done so much in the way of benefiting agriculture, known or practised to any extent in the very best farmed districts. Neither at the period referred to were manures so easily procured, or their nature and properties so well understood, nor were they so generally considered beneficial, so that by far the greater portion of what we call winter grain (from its occupying the ground during the winter season) was sown upon ground that had been summer fallowed but not manured, or upon stubbles that were not so overrun with grass and weeds of various descriptions as utterly to preclude every chance of another poor crop of corn of that description; for in those days there were only imperfect rules and regulations about certain crops succeeding or not succeeding each other; so that when once a piece of ground had been broken up and sowed with corn, so long as it continued to yield sufficient to discharge the moderate cost at which it was cultivated, so long was it subjected to this miserable practice of cropping. Some persons, however, seem to have adopted the ancient Roman process of burning the stubbles for the two-fold purpose of destroying the weeds and partially manuring and ameliorating the soil, though the amount of ashes could have been but trifling. It should be borne in mind also, when comparing the ancient with the modern system of the management of lands generally, that in the ages that are past there were none of those various improved implements for destroying weeds and cleansing land that we now find in general use, as well as the most perfect and suitable tools of every description. Formerly the ploughs were of the rudest and most imperfect construction, while the best of the harrows were those of a triangular shape, constructed of the fork of some tree; the number of tines or teeth, which for the most part were only wooden ones, seldom exceeded seven, one being placed at the intersection of the two sides, and the remaining six equally divided—that is, three distributed on each side. Such were the implements employed in putting in the corn crops; and as manure was but rarely bestowed upon them, it need not be a matter of surprise that they usually were both very precarious and uncertain, and their very best crops were far inferior to those of the present day.

A very considerable portion of the cultivated soils, however, in those early days consisted of common or unenclosed lands, subject to peculiar local regulations respecting the eatage or pasturage of cattle, sheep, &c., over which a tenant individually possessed no control; so that it would often happen that the crops would be exposed to depredations and annoyances which farmers now are not forced to submit to; for although we occasionally find practical agriculturists adopting the system of pasturing down their crops of young wheats that may have become what they consider too forward and luxuriant, yet this is done with peculiar care and attention, and not left to chance, or to the caprice of others. There is no doubt but crops will sometimes be improved by being thus pastured down; for it has, among other effects, that of making the plants 'stool' or spread, and throw out more stalks, or bearing straw, than would have been the case had not this plan been resorted to. One of the greatest objections to early sowing has ever been the advantage it gives to certain weeds of making considerable progress, and getting firmly rooted in the ground before winter sets in; for the wheat plants, if the season happens to be severe, are mostly cut down to the ground, while the weeds continue to resist the frost, and so get a start when the milder weather in the spring comes on, that they could not have done if the grain had been put into the ground a few weeks later. Owing, however, to the improved system of farming, the crops of winter grain are now comparatively little infested with weeds; although there are here and there individuals still to be met with who suffer all sorts of weeds to infest their crops, not only to their own loss and disadvantage, but frequently to the injury of their neighbours, since many weeds disseminate their light seeds over the adjoining fields and farms.

We are, however, by no means the advocates of late sowing; and we have remarked elsewhere, that a week or two earlier or later is often a matter of little moment; for when the weather is favourable for sowing, and the soil in a sufficiently forward state of preparation for the reception of the seed, we would strongly recommend the husbandman not to let pass so favourable an opportunity, though the period should be somewhat earlier than he fully approves of. Or were the case reversed, we should recommend a little longer delay than otherwise might seem desirable, in preference to putting in the seed before the ground be thoroughly prepared to receive it, or while, from previous rains, it is in too wet a condition.

> "Who soweth too lateward, hath seldom good seed;
> Who soweth too soon, little better shall speed:
> Apt time and the season so diverse to hit,
> Let aier and layer help practice and wit."*

It is not a little remarkable that for a considerable period after the introduction of sundry improvements in the practice of farming, the early sowing of winter grain was in most cases insisted upon; whereas it became the custom to sow the spring crops later than had heretofore been the general practice. But as the cultivation of green crops began to be more attended to, and the soils, through them and other improved modes of cultivation, became in a much better condition, experience soon convinced the unprejudiced practical farmer that it was quite possible to have his winter grain in the ground at too early a period, and consequently too far advanced when winter came on; for he found, that upon fertile soils, or those artificially made so, early-sown crops were by no means calculated to ensure abundant returns when the produce came to be gathered into the granary. While with respect to spring grain it was ascertained that, in most instances, the late-sown crops were the most deficient in yield. A change, consequently, has gradually been brought about of something like a month as regards the putting in of the winter grain, and, under certain circumstances, of a considerably longer period; but no

* Tusser, 'March's Husbandry.' Upon the above quotation, we find Dr. Mavor remarking as follows:—"By *aier*, or *air*, is to be understood whatever depends on temperature, weather, and exposure: by *layer*, whatever depends on soil, culture, and its concomitants."

circumstances should be allowed to interfere beyond moderate and reasonable limits; for although success may occasionally attend extremes in sowing and planting, every practical farmer is aware that success on one occasion is a sorry offset against half a dozen failures.

In order that the husbandman should ever be in a condition to embrace the most approved season for depositing the seed in the earth, he should never, under any plea or consideration, allow himself to be behind with his work; since frequently about this period of the year the weather becomes so unsettled, and so much inclined to rain, that it is now no season to be depended upon for making up for opportunities that may have been permitted to pass away unimproved at a much earlier and more settled season of the year. When the soil is so wet at the time the seed is sown as to render it difficult to work it with the common agricultural implements, there are several things which operate against its yielding a good crop. As the surface, under such circumstances, will usually be less smooth or even, the seed in all likelihood will be less equally distributed; and when covered by the harrow or the plough, if no other portion of it rots and becomes totally lost, that which is poached or trod into the ground by the feet of the horses or cattle is sure to be so. But, upon most soils, under such circumstances, it will be a very difficult matter to cover the seed at all as it ought to be; for no plough or harrow was ever yet invented that did not, in tenacious and clayey soils, become clogged with earth more or less, so as partially to drive the seed before it. Soils of this nature, after being stirred in too wet a condition, are sure to consolidate, or bake, as it is commonly called; and nothing so much retards the growth and impoverishes young plants as the surface of the soil becoming reduced to this condition, for it commonly remains in such a state until the breaking up of the winter frosts. Neither when the soil is wet can the seed by any possibility be so equally covered as when the soil is in a dry and manageable state; and, when this is the case, the consequence will continue apparent even until the time of harvest; for during the whole season the plants will exhibit an inequality in their growth, and the crop will not ripen evenly and equally as it otherwise would have done.

It is quite true that some sorts of soil may be worked too much, that is, until they become so finely pulverised that they do not afford sufficient stability to the plants as they grow up; while a very fine tilth is also liable to bake, as well as land that is worked when wet; for should a heavy fall of rain take place, so as to make the surface quite smooth, it is in danger of becoming baked or consolidated when bright sunshine succeeds. Any one that may have noticed the effect that is produced by pouring large quantities of water upon flower-borders or garden-plots, where the soil has previously been finely pulverised, will perfectly understand the nature of this baking of the soil here referred to; and although it would be impossible to avoid it altogether, care should be taken to prevent it as much as possible. An implicit adherence to this or that rule in carrying out every or indeed almost any part of practical farming to an extreme degree of nicety cannot be altogether recommended; but no general and established principle should be left incomplete where it has been clearly and satisfactorily ascertained that, without certain attentions and processes, the object to be attained can hardly succeed. As connected with this subject, and in order to illustrate some of our observations, we would refer our readers to the wet season which occurred last autumn; indeed the weather was rainy during a considerable part of the summer, which greatly retarded the preparation of the ground intended for winter crops; so that when the period approached for sowing, the rains again succeeded, and the low lands in many parts of the country continued so saturated or flooded, until the end of the year, that it was found impracticable to get in the seed at all with any prospect of a crop. This was looked upon as a great misfortune to the farming community at large, and great was the perplexity in many instances respecting what course it would be the most advantageous for the husbandman to adopt. Some of them were determined to have their seed in, however unfit the soil might be for its reception; while others submitted to have their regular system of crops partially interrupted, and awaited the wasting of the waters. As it happened, those who had exercised their patience were the gainers in the end; for with the new year the state of the weather presently begun to improve, and one month after another continued remarkably favourable for all sorts of husbandry. Nevertheless, as a general prejudice has grown up against cultivating spring wheat, many of the farmers that had intended their lands for winter wheat, were induced to sow barley, and thus probably experienced a trifling loss; but those who ventured to put in wheat during January and February, and, in some districts, many farmers did so, the spring and summer proving favourable, they mostly were rewarded with very tolerable crops; and, what mended matters, their regular course of cropping suffered no interruption. However, in both cases, the harvest that is just ended has fully proved how greatly it was to the advantage of those who waited for a favourable season, and did not attempt to sow their ground while the soil was full of water, since nearly all such attempts failed, as most of the ground treated in that way had to be ploughed up in the spring at a sacrifice of the labour and the seed bestowed upon it; while most of the crops of spring wheat succeeded remarkably well, so as in some measure to redeem its character even where it was held in bad repute.

Every farmer, horticulturist, and florist is fully aware that good seed is one of the most material requisites towards ensuring good crops; for where the seed is in any way defective in quality, it is next to impossible that the crop that it yields should be perfect in both quality and quantity, and, where grain alone is concerned, should be such as is calculated to give satisfaction to the producer, the miller, the baker, and the consumer; and yet it is no uncommon thing to find this great and leading feature of good management neglected. It may not, to be sure, at all times be practicable to procure the very best quality of seed, where the farmer happens not to possess it himself; although in a majority of cases he will be able to accomplish his wishes. Change of seed is now so generally recommended, that it would be superfluous to add anything in its praise, and dangerous to utter a syllable against it; and yet we cannot refrain from strongly expressing it as our decided opinion, and put it in the shape of a question to all farmers and other producers of the necessaries of life, whether it is not the safer plan to stick (at least for a moderate period) to such seed as experience has fully proved to be of a superior quality, in preference to discarding it for some fanciful or new-fangled sort, the virtues of which have yet to be tested and fully proved? Those who cultivate farms of a pretty large size commonly command some variety in the nature and quality of their soil, so as to allow of their changing the same seed from one sort of soil to another; and where that is the case, the adoption of such a plan is much safer and more satisfactory than that of introducing some new species of grain that may possess a good reputation, but which might not succeed upon his farm so well as he had been led to expect. But even amongst those who are the strongest advocates for the change of seed system, some diversity of opinion is apparent; since some of the parties seem to consider that the soil becomes sick (to make use of an expression of their own) of such crops as are continued to be raised upon it for a succession of years; while others assert that the falling off of the quantity or quality in the produce is in consequence of the crops becoming sick of the soil.

However, this seems a matter scarcely worth discussing, since if by a long continuance of sowing the same kind of seed upon the same nature of soils the crops evidently become deteriorated in quantity or quality, and consequently lessened in value, it matters little whether it be the soil or the seed that becomes sick, since the result in either case will be precisely the same.

Since the consumption of wheaten bread has become so general in almost every part of the country, the success of the wheat crop, above all others, has become a matter of paramount consideration with the agricultural interest. Such being the case, much pains have been taken to render its cultivation as perfect as possible; not only as regards the quality of the grain, but every circumstance connected with the entire process, from the first furrow that is turned up in the early preparation of the soil for the ultimate reception of the crop, until the period when it has been secured at the close of the distant harvest. Great pains and expense are, therefore, often bestowed upon soils that are naturally poor, and that are but indifferently adapted for the production of wheat; and when at last the ground has been brought into a fit condition for the reception of the seed, that, as previously stated, should be selected with extreme care. Then the question arises respecting the best mode of putting in the seed, for there are several different plans of doing it, namely, harrowing it in, ploughing it in, drilling it in, or dibbling it; the last-named method, however, being but comparatively little practised, notwithstanding that it effects a considerable saving in the quantity of seed; for, since it has to be performed by hand, the process is a tedious one, and unless wheat were unusually scarce and dear, it is hardly probable that dibbling will ever become general where the crops are on an extensive scale. But in which way soever the seed is deposited in the ground, it is necessary that it should be of a good quality in itself, and at the same time free from infection or disease, as well as from the seeds of obnoxious weeds and plants, either of which might have an injurious effect upon the future crop. Smut, probably, of all others, is the worst thing that can affect a crop of this grain, and hence the numerous precautions that we find adopted to prevent it. Experiments almost innumerable have been tried, from time to time, and although several of them have fearlessly been pronounced absolute preventives or antidotes, even at the present day there does not appear to be any general remedy. We are inclined to believe, however, that at present the antidote against smut the most generally in use is that of steeping the seed-corn in lime-water, or in brine, or lye, and afterwards dusting it with newly-slacked lime; the steeping has the effect of removing all light or imperfect grains, and the effect produced upon the sound ones by the application of the ingredients referred to is supposed not only to remove any infection or disease that the seed might previously have imbibed, but also to invigorate the growth of the plants during their progress towards maturity, besides rendering the crop free from smut at the time of harvest. But experience has fully proved that neither this nor any other treatment will, at all times, and in all cases, prevent the appearance of smutty ears though the crops are under the very best management; and hence it is believed that, besides the seed having been more or less affected with this distemper, there are other causes which tend to produce it; and many of our first-rate practical farmers are of opinion that the nature of the seasons, as well as the quality of the soil, has something to do with increasing or lessening the quantity of smutty ears that are found to infest crops that have been carefully attended to; but to what extent these matters would affect a crop of well-farmed wheat would be exceedingly difficult to ascertain. However, on all hands it is admitted that due care and attention should be bestowed upon the seed; and although the very best seed may happen to fail, with seed of an imperfect or inferior quality it would be absurd to look for perfect success.

Besides smut, there are other things which occasionally affect wheat-crops, among which may be reckoned blight, mildew, and rust; but since none of these are considered to be so greatly dependent upon the quality of the seed, but more particularly upon circumstances connected with the seasons, they do not appear to come under the class of evils over which the husbandman possesses an immediate control. Then in relation to various sorts of weeds and plants that frequently infest the soil, even where it is well cultivated, it would now be unpardonable, when ingenuity has done so much in the way of providing improved fanning and winnowing machines, to allow their seeds to remain in the grain when dressed, and so be introduced along with the seed-corn at the time of sowing it; and such a piece of neglect or mismanagement would seriously injure the reputation of any practical agriculturist. It may be true that a careful weeding and hoeing in the following spring might have the effect of freeing, in a great measure, the crops from both the weeds that had been suffered to remain in the soil, as well as such as had been introduced with the seed; yet as prevention is always better than cure, there never ought, among good farmers, to be any necessity for resorting to such a remedy.

Some diversity of opinion still exists respecting the age which various seeds ought to have attained at the time of sowing or planting them, and amongst those the proper age for seed-wheat, some persons alleging that the seed should invariably be new, that is, of the crop but recently harvested; while the majority appear to be of the opinion that the seed which is a year old is to be preferred. In Tusser's time it would appear that new seed was commonly used. But at a much more recent date than that of Tusser's writings, the farmers who were very particular in such matters used to take the trouble to pick out the best and finest of the ears for seed; but then, most of the corn-crops were unequal and defective, so that many of the ears yielded grain of a coarse, light, or inferior quality; and in those days it was a more difficult matter to separate the best from the inferior sorts at the time of dressing it. A practical writer of the last century makes the following remarks upon seed-wheat, which are well worth the husbandman's attention:—"I should prefer to sow that which was a year old, provided the year it was gathered in had been warm and dry, to that which has been gathered in a season somewhat inclined to rain; for in wet seasons all the productions of the earth are inferior, from their not attaining a like degree of perfection, the seed not being so well-flavoured and free from moisture, nor does it keep so well. Partly owing to the reason here adduced I always prefer having my seed from the crops raised upon high and dry lands, rather than from such as are grown on the low flats or marshes, and having some extent of both these descriptions of ground upon my farm, I have, from time to time, availed myself of trying experiments, in order to become fully convinced of the soundness of this opinion; and I now feel quite certain that what I have stated above will be found to be fully borne out in the general practice of farming."

At the present day we find wheat known under such a variety of names—almost as numerous as the different districts of country in which it is cultivated—that it would be perfectly useless to attempt to enumerate them; for the very same sort of grain will be found under half a dozen different names in the same number of local districts of the country. Then some kinds acquire new names by their travelling to foreign countries, which is not a little amusing. For instance, a great number of years ago the old-fashioned Lammas white wheat was introduced into our North American colonies, before the Revolution took place and the United States declared their independence. The cultivation of it, amongst several

other sorts, became generally extended from one part of the country to another, frequently changing names as it passed from one state or colony to an adjoining one, at the whim or caprice of the parties thus introducing it, until many years ago it found its way into Upper Canada under the fascinating name of the Virginia silver-straw; and, proving a useful sort of grain for the wheat-lands of the upper province, it soon became more generally cultivated than any other sort; but in the mean time the old title was sunk, and it acquired that of the Canada flint wheat: some twenty years ago a farmer introduced it into the West of England, direct from Canada, under its new title; and there is little doubt but the same parties who had been familiar with Lammas white wheat in their younger days, looked upon this new introduction from Canada as an entirely new sort, probably either not knowing better or not taking the trouble to recollect that all the different sorts of wheat produced at present, both in the United States and the Canadas, were originally introduced from European countries, and most of them direct from Great Britain. However, generally speaking, our prices current recognise only these two distinctions, namely, white and red; so that it is for the experienced farmer to consult his own interests, and among the several varieties of each to make a prudent selection, since there is no manner of doubt but that some sorts are better suited to particular soils and situations, and modes of treatment, than other sorts would be, for they are neither all equally hardy, prolific, nor of the same quality.

Some of the red wheats, from their hardier character and coarser quality, will bear sowing very late in the season, and there seems but little doubt that what is now commonly called spring wheat is nothing more than a hardy sort of red wheat, which has, by frequent late sowings, at length become reconciled to maturing its seed although not introduced into the ground until the early part of the spring; and it is a well-known fact to most persons familiar with the cultivation of crops in general, that the nature of most kinds of plants may be in some measure changed by subjecting them to a different mode of treatment to that which they may have heretofore been accustomed to.

We give below the results of a careful experiment on the relative values of several varieties of wheat, made by John Morton, Esq. of Chester Hill, near Stroud.* The planting was performed with mathematical precision, the seeds of each variety being planted at equal distances, and they were the best and plumpest that could be obtained. The soil was a stonebrash about ten inches deep. The results are shown in the table; but it is necessary to remark that many experiments are necessary to arrive at satisfactory conclusions.

The proper selection of seed is indeed a matter of national importance. In England and Wales alone the wheat produced one year with another is estimated at about 12,350,000 quarters, the average produce per acre being perhaps twenty-six bushels. If this amount could be raised to twenty-seven bushels by a better selection of seed, 475,000 quarters of wheat, worth, at 50*s.*, about 1,200,000*l.* yearly, would be added to the national wealth The question of sowing grain thick or thin is far from being satisfactorily settled, each practice having its advocates; yet a saving of half a bushel of seed per acre would be a gain of 240,000 quarters, or 600,000*l.* to the country each year. It is only by discussion and experiment that the best practice is likely to be generally adopted. In some parts of the country there are Clubs of practical farmers who meet for the excellent purpose of discussing doubtful points of agricultural science; but such institutions are unfortunately rare. We recently saw a Report of one of these clubs established at Harleston in Suffolk, which shows their great practical value. Alluding to the keep of farm-horses which had been under discussion, the Report states:—"Your Committee, in common with every member of the Club, was astonished to find that, amongst a body of farmers, all residing within four or five miles of the place of meeting, all using a similar breed of cart-horses, and cultivating a similar description of land, such an astonishing difference in the expense of maintaining their cart-horses should exist, amounting, in authenticated statements, to upwards of 50 per cent.,

* Vol. i., page 41, of the 'Journal of the English Agricultural Society.'

When planted.	No.	Name of Wheat.	No. of seeds planted.	Loss of seeds from birds, frost, &c.	Produce of 99 square ft. Plants or roots.	Produce of 99 square ft. Heads o' grain.	No. of ears in one square foot.	Average No. of heads per root.	Weight of grain produced from 99 square feet.	Weight of wheat per acre.	No. of bushels per acre, at 64 lbs. per bushel.	Length of straw.	Weight of straw produced from 99 square feet.	Weight of straw per acre.	Weight of roots with 2 in. of stem.	Weight of roots per acre.
									lbs.	tons. cwt. qrs. lbs.		ft. in.	lbs.	tons. cwt. qrs. lbs.	lbs.	tons. cwt. qrs. lbs.
Nov. 15	1	Old Red Lammas	792	387	405	2463	25	6	6	1 3 2 8	41½	5 8	16½	3 5 2 24	5	0 19 2 6
..	2	Golden drop	792	291	501	2542	25	5	6¼	1 6 2 8	46¼	5 6	15¼	3 0 0 3	5½	1 0 2 14
..	3	Ten-rowed prolific	792	391	401	1937	19	3¾	4¼	0 16 2 16	27	5 5	12¾	2 10 0 10	5	0 19 2 6
..	4	Hunter's	792	273	519	2028	20	4	4¼	0 16 2 16	27	5 6	12¾	2 12 0 10	5	0 19 2 6
..	5	Thick-set Suffolk	792	120	672	3039	30	4½	10½	2 1 1 0	72½	5 8	19½	3 5 2 14	7½	1 9 1 24
..	6	Hickley's Prolific	792	132	657	2886	29	4½	10¼	1 19 3 3	69½	5 7	16½	3 3 2 24	6¾	1 6 2 8
16	7	White Taunton	792	305	487	2695	27	5½	6	1 3 1 20	41½	5 6	15½	3 0 0 0	5½	1 1 2 12
..	8	Silver drop	792	218	574	2582	26	4½	8	1 11 1 20	55	5 6	18½	3 12 2 12	6	1 3 2 8
..	9	Scotch white	792	379	413	2386	24	5¾	6¼	1 4 2 6	43	5 9	16½	3 5 2 24	5½	1 1 2 12
..	10	Talavera	792	434	358	1985	20	5½	5¼	1 0 2 14	36	5 8	14½	2 16 3 14	5½	1 1 2 12
21	11	Smithers' Hereford white	792	319	473	2529	25	5½	9½	1 17 1 8	65½	5 6	17½	3 8 3 20	5	0 19 2 0
..	12	A red wheat	792	252	540	3153	35	6¾	12	2 5 1 12	82½	5 0	22	4 7 0 2	9	1 15 2 6
..	13	EgyptianCone	792	528	264	711	7	2½	3¾	0 13 0 24	23	6 0	8½	1 11 2 2	3	0 11 3 4
..	14	Red-straw Lammas	792	510	282	2096	21	7¾	4½	0 16 2 16	27	5 8	14½	2 16 3 4	5	0 19 2 6
..	15	Blue cone	792	264	528	1626	16	5	6	1 3 1 28	41¼	6 0	9¾	1 16 1 16	6	1 3 2 8
..	16	Red cone	792	456	336	2446	24	7	10	1 19 1 4	68¾	5 3	12½	2 9 0 0	4¾	0 18 2 10

whether estimated at per head for each cart-horse, or per acre for the arable land." That is, on equal quantities of land, the horses of one farmer cost twice as much as those of another, whether arising from the different number of cattle or from the manner in which they were maintained. The Harleston Committee very properly ask—"What greater proof could be required of the necessity for discussion?"

The crops of grain, except in remarkably late seasons, and in situations peculiarly bleak and elevated, have usually been gathered in before the commencement of the month, but that valuable acquisition to the agricultural crops of this and many other countries, and which, among the lower orders, is frequently substituted in the place of bread—potatoes, is now commonly ready; the early sorts, however, being ripe and ready for gathering in at an earlier period. While it lasts, the potato-gathering is a very busy season; and when we take into consideration the immense quantities that are now consumed annually, their consumption is far from being limited to the supply necessary for the human race, for during the winter season, particularly in abundant years, large quantities are given to hogs and cattle. Bread-corn is invariably accounted the grand staple commodity of the agricultural districts, and with much propriety it generally may be considered as such; but nevertheless the potato crop comes in for a much higher degree of consideration than at first sight would seem to be the case. Indeed if we were to take weight against weight, and bushel against bushel, it has been calculated that the consumption of potatoes in the United Kingdom equals, if not exceeds, that of the various sorts of grain manufactured into bread: we do not make the comparison with the entire of the crops of what is generally understood by bread-corn, for immense quantities of grain are used in distillation, brewing, &c., besides what is consumed by all sorts of farm-stock and the whole fraternity of domestic animals. This, at a cursory view, would seem almost incredible,—for when we look abroad among the farming classes of the arable districts, we there discover that the number of acres of ground devoted to the raising of this useful and nutritious vegetable bears but a very small proportion to the quantity of land devoted to the growing of corn; indeed so much so, that the potato crops appear to occupy comparatively but quite insignificant spaces upon the generality of farms. It must be borne in mind, however, that one acre of ground, properly cultivated, will frequently yield three hundred bushels of potatoes (sometimes much larger quantities are grown), while an acre of wheat that produces thirty bushels is reckoned above an average crop. Hence it would appear, taking these quantities to found a calculation upon, that one acre of ground will yield as many bushels of potatoes as ten acres will bushels of wheat; so that a ten-acre field annually devoted to potatoes, upon a farm of two hundred acres, would yield as many bushels of the former as there were likely to be bushels of the latter, since not more than the one-half of any farm can annually be devoted to wheat crops—indeed seldom more than one-third, under the improved mode of agriculture. But besides the potato crops that are annually raised in the arable districts, in those parts of the country devoted to grazing, as well as where the farms are of a mixed character, crops of potatoes are more or less extensively cultivated; while the cottager, who has but a few perches of ground attached to his humble dwelling, will generally be found to have the whole or greater portion of it devoted to a potato crop. Moreover, in the vicinity of towns and populous communities, the market-gardeners among their general stock of vegetables raise considerable quantities of potatoes; though, perhaps, only for the supply of the markets during the early part of the season, for they commonly get a second crop of vegetables of some other sort from their early potato grounds; and hence it would appear that in addition to the crops generally grown by the practical farmers, vast quantities are produced elsewhere.

In the households of our nobility and gentry, as well as among the upper orders of the middle classes, there can be little doubt but a much larger quantity of bread and bread-stuff is consumed, than there is of potatoes; but with nearly all grades among the lower orders, the weight of potatoes consumed generally exceeds that of bread.

From the large quantities of potatoes that are, as we have shown, sometimes produced on the acre, it might seem to persons but little acquainted with the cultivation of crops in general, that potatoes must be an exceedingly profitable one. This, by no means, is invariably the case, for unless a considerable expense is incurred in cleaning and preparing the soil, and in hoeing and weeding the crops through the summer, a good crop need hardly be looked for. Besides, where manure is scarce and dear, another considerable item of expense will be incurred, for even when planted upon good soil, potatoes require the application of a larger quantity of stable manure than other crops do in general. There is, moreover, more or less risk, for the potato plant being one of those peculiarly susceptible of frost, either a very late frost in the latter part of spring, or an unusually early one in the latter part of summer, will often do a serious injury to a crop that had looked very promising. When it is practicable, they should be gathered while the weather is dry; or when that is not convenient, they ought to be spread upon the ground to dry before they are buried or enclosed in heaps, or hogs, or holes, or in the depositaries where they are usually kept, under whatever local name they may be known; for their quality is partially injured, and some few are apt to decay, when they are covered up in these holes in a wet and muddy condition. These places of deposit should be made judiciously; clean straw—or dry fern will answer equally well—should be covered over them sufficiently to keep the mould that is afterward laid thereon from finding its way among them; and although a sufficient quantity of earth to prevent the frost from penetrating to the potatoes has to be piled over them—and so compactly and judiciously as to throw off the rains to which the heaps will be exposed—too deep a covering is by no means to be recommended, for it will sometimes cause them to heat, and thereby induce a partial fermentation which invariably injures the quality. There is scarcely any other agricultural production that varies so greatly in price, between one part of the country and another, as potatoes do; much of which is owing to the heavy nature of the article, and hence the great cost of getting it to market where the means of transport are not of the most favourable nature. In London the York reds are esteemed among the best quality of potatoes in the regular supply brought to the London market, where, although the price does undoubtedly somewhat vary, few of the retailers of vegetables sell them at less than six shillings the hundredweight the year round; while, in the interior of Yorkshire, as also in some of the adjoining counties, where precisely the same sort of potatoes are cultivated, they frequently may be purchased in the small market-towns for one-third of that sum, or even at a lower rate. When the potato crops have been cleared away, the ground is mostly in excellent condition for the reception of winter grain, the soil, for the most part, being peculiarly free from grass and weeds, as well as in fertile condition.

By the latter part of the month the turnip crops are usually commenced upon, for in the generality of seasons the meadows and pastures fall off so much about this period, as not to afford a competent supply of succulent food for either milch-cows or fat stock; so that turnips, cabbages, or some other similar production, have to be resorted to for beasts that have already become half or three-quarters fat upon the summer's grass, which if neg-

lected at this particular season, the intention of the grazier would be thereby defeated. It also usually happens, that about this period of the year, large quantities of lean stock are bought in for the purpose of winter feeding; and in order to improve their condition before the more severe part of the season comes on, and the hay-stack has to be resorted to, the feed in the old pastures is therefore now bestowed upon the lean portion of the stock, while other means are found to complete the process of fattening. Great numbers of Scotch, Welsh, and other descriptions of hardy cattle are purchased at the distant fairs at this season; many of which are fed upon straw during the winter, and turned into the pastures to fatten on the return of spring, where the farmers find it convenient to do so; or else again sold at the spring fairs to those who occupy suitable lands to graze them upon: the farmers of the arable districts find it advantageous to have their large quantities of straw converted into manure, so that although they may make but little by stock which they buy in the autumn and sell again in the spring, yet by this means they accumulate vast quantities of manure which are of immense value as dressings for the various kinds of crops.

At this season of the year it again becomes necessary that the husbandman should see that his fences are all in good repair, before the young crops spring up, and ere the season be so far advanced as to make hedging and ditching, in many situations, a more difficult matter to perform. Draining and land-ditching should now be performed where the nature of the ground requires it, and may be continued through the winter season, whenever the weather is of a nature to admit of out-door labour; but there are few things that more particularly require the occasional presence of the superintending eye of the master than draining does in the various modes in which it is now practised. Most sorts of labour remain for inspection when the work is finished; but with draining the reverse is the case, for the moment the drain becomes closed and filled up, it becomes impossible to ascertain whether the work has been properly executed or otherwise; so that when the parties employed are not thoroughly trustworthy, it is highly necessary that their work should be inspected as they proceed. In the early part of the month, when the autumnal rains happen not to have come on, the ponds and watercourses may be advantageously cleared out; but as there is always a risk of deferring such matters to so late period, it would be better to attend to these things several weeks earlier in the season. And now, when the storms may be occasionally expected to visit us in our somewhat uncertain climate, the threshing-floor is got ready, and the flails are heard at work, for on many farms threshing is looked upon as a sort of reserved labour, in which persons that are employed constantly upon the farm may be occupied in stormy weather, or when other work fails. The state of the corn-market, however, materially affects the threshing season; and among small and needy farmers their necessities frequently compel them to hurry their crops to market. But the maltsters look for a supply of barley about this season, so that it commonly happens that threshing comes pretty generally into operation. Not, however, that it is so easily performed now as at a later period, for dry frosty weather is the most favourable for the grain being easily separated from the straw. Recently-threshed straw is also more acceptable to cattle than that which has been threshed some time and stowed away.

MONTHLY CALENDAR.—NOVEMBER—Eleventh Month.

Day of the Month and Week.	Day of the Year.	Sundays and Remarkable Days.	Sun rises.	Eq. Time. Clock aft. Sun.	Sun sets.	Moon's Age.	Moon rises.	Moon sets.
			h. m.	m. s.	h. m.		h. m.	h. m.
1 *Su*	306	20 *S. aft. Trin. All Sts.*	6 56	16 17	4 31	7·1	1a30	9a34
2 M	307	All Souls. M. Term beg.	6 58	16 17	4 29	☽	1 49	10 48
3 Tu	308	*Princess Sophia b. 1777.*	6 59	16 17	4 27	9·1	2 5	morn
4 W	309	. . .	7 1	16 16	4 26	10·1	2 19	0 4
5 Th	310	*Gunpowder Plot, 1605.*	7 3	16 14	4 24	11·1	2 31	1 20
6 F	311	. . .	7 5	16 12	4 22	12·1	2 44	2 38
7 S	312	. . .	7 7	16 8	4 21	13·1	2 58	4 0
8 *Su*	313	21 *Sunday after Trinity.*	7 8	16 4	4 19	14·1	3 15	5 25
9 M	314	Lord Mayor's Day.	7 10	15 59	4 17	○	3 38	6 56
10 Tu	315	. . .	7 12	15 53	4 16	16·1	4 11	8 27
11 W	316	St Martin. Half Quart.	7 14	15 46	4 14	17·1	5 0	9 54
12 Th	317	Cam. M. Term div. m.	7 15	15 38	4 13	18·1	6 7	11 4
13 F	318	. . .	7 17	15 30	4 11	19·1	7 28	11 57
14 S	319	. . .	7 19	15 20	4 10	20·1	8 56	0a32
15 *Su*	320	22 *Sunday after Trinity.*	7 21	15 10	4 9	21·1	10 22	0 55
16 M	321	. . .	7 22	14 59	4 7	☾	11 45	1 13
17 Tu	322	. . .	7 24	14 47	4 6	23·1	morn.	1 27
18 W	323	. . .	7 26	14 34	4 5	24·1	1 3	1 40
19 Th	324	. . .	7 27	14 21	4 3	25·1	2 19	1 52
20 F	325	. . .	7 29	14 6	4 2	26·1	3 34	2 4
21 S	326	St. Cecilia.	7 31	13 51	4 1	27·1	4 49	2 18
22 *Su*	327	23 *Sunday after Trinity.*	7 32	13 35	4 0	28·1	6 4	2 36
23 M	328	. . .	7 34	13 18	3 59	29·1	7 19	3 0
24 Tu	329	. . .	7 36	13 0	3 58	●	8 29	3 31
25 W	330	Mich. Term ends.	7 37	12 42	3 57	1·4	9 32	4 13
26 Th	331	. . .	7 39	12 22	3 56	2·4	10 24	5 8
27 F	332	. . .	7 40	12 2	3 55	3·4	11 3	6 11
28 S	333	. . .	7 42	11 42	3 54	4·4	11 32	7 21
29 *Su*	334	*Advent Sunday.*	7 43	11 20	3 54	5·4	11 53	8 34
30 M	335	*St. Andrew.*	7 45	10 59	3 53	6·4	0a10	9 48

Meteorological Averages.		
Barometer.		Ins.
Mean height		29·776
Highest	.	30·270
Lowest	.	29·080
Hygrometer.		°
Mean dew-point		40·5
Highest	.	40
Lowest	.	25
Mean dryness		2·4
Mean greatest do. of day		4·7
Greatest dryness		14
Thermometer.		
Mean temperature		42·9
Highest		62
Lowest		23
Radiation.		
Mean great. of Sun		6·8
Greatest power		23·5
Mean cold of terrest.		3·6
Greatest ditto		10
		Ins.
Mean qty. of rain		2·400
Mean of evap.		0·770

Table of the Winds.

	Days.	Dew-P.
N. .	3	38°
N.E. .	3	37
E. .	3	40
S.E. .	2	46
S. .	3	48
S.W. .	6	47
W. .	5	42
N.W. .	5	35·5

SUNDAY LESSONS.

Nov. Morning.

1 20 S. aft. Trin. All Saints: Joel 2.. Heb. 11 v. 33 & 12 to v. 7
8 21 „ Hab. 2 Lu. 24
15 22 „ Pro. 2 John 7
22 23 „ „ 11 „ 14
29 Ad. Sun. Isa. 1 „ 21

Evening.

Nov. 1 Mic. 6 ... Rev 19 to v. 17
8 Pro. 1 1 Thes. 4.
15 „ 3 1 Tim. 4.
22 „ 12 Titus 1.
29 Isa. 2 Heb. 5.

THE MOON'S CHANGES.

First Quart. 2nd day, 1h. 4m. aft.
Full . . . 9th day. 5h. 52m. aft.
Last Quart. 16th day, 8h. 54m. mn.
New . . . 24th day, 2a. 12m. mn.

Day of Mth.	Length of Day.	Day's decrease	Day break.	Twil. ends.	Sun's Semi-dl.
	h. m.	h. m.	h. m.	h. m.	′ ″
1	9 35	7 59	5 14	6 27	16 9
6	9 17	7 34	5 22	6 20	16 10
11	9 0	7 17	5 29	6 13	16 11
16	8 45	7 7	5 36	6 7	16 12
21	8 30	7 0	5 42	6 2	16 13
26	8 17	6 59	5 50	5 59	16 14

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